REMARKS

I. Support for the Amendments

Claims 1-32 were originally in the application. Claims 1-25 have been canceled, and claims 29-32 have been withdrawn. Claims 26-27 and 33-44 were previously in the application.

Claims 26-27 and 33-44 were previously in the application, while claims 29-32 were withdrawn. Claims 40-41 and 43 have been amended, non-elected claims 29-32 have been canceled, and new claims 45-48 have been added, as shown in the following listing of claims, which will replace all prior versions and listings of claims in the application. Claims 29-32 have been canceled without prejudice to their pursuit in an appropriate divisional or continuation application. Claims 26-27 and 33-48 are currently in the application.

Support for amended claims 40-41 and 43 and for new claims 45-48 can be found in the original specification, figures, and claims. Claims 40-41 were dependent on a previously canceled base claim and have been amended to be dependent on the underlying independent claim 26. Claim 43 has been amended for technical reasons. Support for these amendments can also be found in the previous versions of these claims.

Additional support for new claim 45 can be found, e.g., in original claims 26-27 and previously presented claims 33-36 and 38. Additional support for new claims 46-48 can be found, respectively, in previously presented claims 39-41. Additional support for new claims 45-48 can be found, e.g., from page 1, line 19, to page 2, line 6; on page 3, lines 3-9 and 24-28; from page 6, line 13, to page 10, line 2; and in the Examples.

II. Status of the Claims

Claims 1-32 were originally in the application. Claims 1-25 have been cancelled. Claims 26-32, which were previously non-elected claims in U.S.S.N. 09/354,664, were previously in the application. Claims 26-32 were subject to a restriction requirement. Claims 26-28 were elected.

Claims 26-27 and 33-44 were previously in the application, while claims 29-32 were withdrawn. Claims 40-41 and 43 have been amended, non-elected claims 29-32 have been canceled, and new claims 45-48 have been added, as shown in the following listing of claims, which will replace all prior versions and listings of claims in the application. Claims 29-32 have been canceled without prejudice to their pursuit in an appropriate divisional or continuation application. Claims 26-27 and 33-48 are currently in the application.

III. The Information Disclosure Statement is Acknowledged

Applicants thank the Examiner for acknowledging the Information Disclosure Statement.

IV. The Power of Attorney is Acknowledged

Applicants thank the Examiner for acknowledging the Power of Attorney.

V. The Request for a Corrected Filing Receipt

Applicants are currently awaiting a revised, corrected filing receipt.

VI. The Drawings are Accepted

Applicants thank the Examiner for confirming acceptance of the drawings.

VII. The Substitute Specification is Entered

Applicants thank the Examiner for confirming entry of the substitute specification.

VIII. The Non-Elected Claims are Canceled

The Examiner has requested cancellation of the non-elected claims. Applicants have canceled the non-elected claims without prejudice to their pursuit in an appropriate continuation or divisional application.

IX. The Rejection of Claims 40-42 under 35 U.S.C. §112, Second Paragraph, is Rendered Moot

The Examiner has rejected claims 40-42 under 35 U.S.C. §112, second paragraph, for dependence on a canceled base claim. Applicants have amended claims 40-42 accordingly, thereby rendering this rejection moot.

In view of the foregoing, Applicants respectfully submit that claims 40-42 fulfill the requirements of 35 U.S.C. §112, second paragraph, and request the Examiner's reconsideration of these claims accordingly.

X. The Rejection of Claims 26-27, 33-39, and 43-44 under 35 U.S.C. §103(a) is Traversed

The Examiner has rejected claims 26-27, 33-39, and 43-44 under 35 U.S.C. § 103(a), alleging obviousness over Rogers et al. (Analyt. Biochem. 247: 223-227 [May 1997]; "Rogers & Burgoyne" or "Rogers") in view of Burgoyne (U.S. Patent 5,496,562) in view of Kahn et al. (Methods Enzymol. 68: 268-280 [1979]; "Kahn"). Applicants respectfully traverse this rejection.

The Patent Office alleges, in part:

> The applicants state that Rogers et al. shows isolation of chromosomal DNA but not plasmids from bacteria, and that Burgoyne shows application and recovery of isolated plasmid DNA rather than intact cells comprising plasmid DNA.
>
> In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. [Citations omitted.] The motivation to combine the references, as noted above, is to allow for storage of plasmids present in cells.
>
> The applicants further state that one of ordinary skill in the art would not combine Rogers et al. with Burgoyne because it could not be assumed that plasmid DNA would behave in the same manner as chromosomal DNA in the instant claimed method. The applicants note that Old et al. shows that chromosomal DNA and plasmid DNA have different properties that are taken advantage of in purification protocols. However the purification protocols noted in Old et al. are entirely different than the instant claimed purification protocols. The protocols noted in Old et al. use differences in properties between chromosomal DNA and plasmid DNA with regard to density in the presence of ethidium bromide, or denaturation at pH 12.0-12.5. Because the instant claimed purification protocol does not rely on these properties, Old et al. does not provide evidence that plasmid DNA would behave differently than chromosomal DNA DNA in the instant claimed method. The applicants state that Hansen et al. (post filing art authored by one of the instant applicants) shows that only low amounts of plasmid DNA

> remain on the solid matrix when cells comprising plasmids are applied to the matrix. However, Hansen et al. disclose the claimed method and further show on page 74 that sufficient amounts of plasmid DNA are present on the solid matrix to allow for recovery for use in amplification of plasmid DNA sequences of interest, or transformation of recipient cells with the plasmid DNA. Presumably the applicants do not intend to argue that the claimed method is not enabled. The results of Hansen et al. establish that plasmid DNA can be used in the method of Rogers et al. in view of Burgoyne in view of Kahn et al. as noted in the rejection above. [Pp. 5-6; par. 10; citations omitted; all emphasis added.]

Applicants respectfully disagree for reasons already on record, particularly in the Amendment filed previously on November 28, 2006, and for the reasons that follow.

As previously noted, Rogers studied polymerase chain reaction (PCR) amplification of **genomic** DNA ***in situ* on FTA® medium**. In contrast, the present application demonstrates the ability of **plasmid** DNA to **elute** from the washed punch after a 20-minute incubation in buffer at room temperature such that the **plasmid vector** DNA is **isolated *from* the FTA® medium** (e.g., p. 13, ll. 3-6), in accordance with claim 26.

Nor are the deficiencies of Rogers remedied by the disclosure of Burgoyne. In Burgoyne's patent, ***previously purified*** plasmid DNA was applied to the FTA® cards and then the card was coated with a plastic polymer (polystyrene) to keep the card dry and/or preserve the DNA when stored in the freezer (Example 2).

In the present application, two different **host cells**, bacteria and yeast, each containing plasmid DNA were applied to FTA® cards. The specification shows that the cells were lysed and the plasmid DNA retained and protected by the FTA® chemicals during room temperature storage (for at least 3 months; p. 18, ll. 28-29). M13 plaques and cells infected with M13 bacteriophage were also used (see Example 4). As shown in Examples 1-2, **plasmid DNA *directly from host cells* can be *eluted by washing* in order to isolate it *from* the FTA® card** (see, e.g., p. 17, ll. 1-17 and Table 4; p. 13, ll. 3-6; p. 14, ll. 16-18 and 25-30).

In addition to the arguments already presented, Applicants respectfully rebut the foregoing Response to Arguments as set forth by the Patent Office.

First, the Patent Office alleges that Applicants were attempting to show nonobviousness by attacking references individually, when in actuality Applicants were providing a showing of a lack of suggestion or motivation to combine two diverse references. A later filed patent application claiming a invention based on a desirable result (most inventions being desirable) is not tantamount to a motivation to combine unrelated references in hindsight. Nothing in either reference, either alone or in combination, suggests that combining the references would somehow manage to yield a method for storing or, as here, isolating plasmids present in cells. One of ordinary skill in the art would not have been motivated to combine the teachings of Burgoyne with those of Rogers.

Second, the Patent Office clearly misunderstands the arguments presented by Applicants with respect to Old & Primrose. In the previously filed Amendment of February 14, 2007, Applicants pointed out:

> One of ordinary skill in the art would not have been motivated to combine the teachings of Burgoyne with those of Rogers. Genomic DNA, due to its large size relative to plasmid DNA, behaves differently under various circumstances. Differences in the properties of genomic vs. plasmid DNA have been exploited in a wide range of laboratory processes, e.g., in DNA isolation in order to separate the two types of DNA (see, e.g., Old & Primrose, Principles of Gene Manipulation (4th ed.), Blackwell Scientific Publications [Boston: 1989]). [Pp. 12-13.]

Applicants cited Old & Primrose as providing examples of the inherently different properties of plasmids vs. genomic DNA in rebutting the allegation of the Patent Office that one of ordinary skill in the art would have been motivated to combine the Burgoyne and Rogers references. The fact that these protocols were, not surprisingly, different than the protocols of

the present invention does not render them irrelevant. Instead, the reference was brought to the attention of the Patent Office as evidence of the inherently different properties of the two types of DNA and the lack of suggestion or motivation to combine references relating to disparate subject matter.

Third and likewise, the Patent Office clearly misunderstands the arguments presented by Applicants with respect to Hansen. Applicants were not remotely suggesting that the present invention was not enabled. Clearly Hansen showed, as quoted by the Applicants, that low amounts of plasmid DNA remained on the solid matrix - not "when cells comprising plasmids are applied to the matrix," but rather when the plasmids are eluted. Once again, the reference was brought to the attention of the Patent Office as evidence of the inherently different properties of the two types of DNA and the lack of suggestion or motivation to combine references relating to disparate subject matter.

As noted previously, Kahn's disclosure, e.g., that bacteria can contain plasmid cloning vehicles, fails to remedy the deficiencies of Burgoyne and/or Rogers.

In view of the foregoing, Applicants respectfully submit that claims 26-27, 33-39, and 43-44 fulfill the requirements of 35 U.S.C. §103(a), and request the Examiner's reconsideration of these claims accordingly.

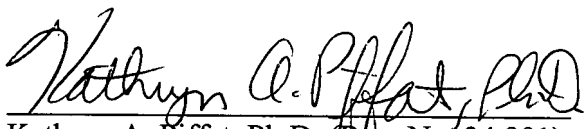
CONCLUSION

In view of the foregoing amendments and remarks, the present application is respectfully considered in condition for allowance. An early reconsideration and notice of allowance are earnestly solicited.

It is believed that all outstanding rejections have been addressed by this submission and that all the claims are in condition for allowance. If discussion of any amendment or remark made herein would advance this important case to allowance, the Examiner is invited to call the undersigned as soon as convenient.

Applicants respectfully submit that no extension of time is required. If, however, a petition for an extension of time is required, then the Examiner is requested to treat this as a conditional petition for an extension of time and the Commissioner is hereby authorized to charge our deposit account no. 04-1105 for the appropriate fee. Although it is not believed that any additional fee (in addition to the fee concurrently submitted) is required to consider this submission, the Commissioner is hereby authorized to charge our deposit account no. 04-1105 should any fee be deemed necessary.

Respectfully submitted,



Date: July 13, 2007

Kathryn A. Piffat, Ph.D. (Reg. No. 34,901)
EDWARDS ANGELL PALMER & DODGE, LLP
P.O. Box 55874
Boston, Massachusetts 02205
Telephone: 617-439-4444
Facsimile: 617-439-4170

Customer No. 21874
BOS2_619578.1